



UNITED STATES PATENT AND TRADEMARK OFFICE

7

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,879	09/30/2005	Lyubov Ryabova	58763.000029	5249
21967 7590 10/16/2007 HUNTON & WILLIAMS LLP INTELLECTUAL PROPERTY DEPARTMENT 1900 K STREET, N.W. SUITE 1200 WASHINGTON, DC 20006-1109			EXAMINER PROUTY, REBECCA E	
			ART UNIT 1652	PAPER NUMBER
			MAIL DATE 10/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,879	Applicant(s) RYABOVA ET AL.	
	Examiner Rebecca E. Prouty	Art Unit 1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 15-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1652

Claims 9-14 have been canceled.. Claims 1-8, 15-22 and newly presented claims 23 and 24 are still at issue and are present for examination.

Applicants' arguments filed on 8/2/07, have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claims 22 and 23 are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 15. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 15 recites a cell-free extract while claim 22 recites a cell-free system however both are recited as including components for translation of mRNA and added ATP-sulfurylase. Thus they appear to be synonymous. Similarly while claim 23

Art Unit: 1652

recites a cell-free system comprising a cell-free extract, the system does not include any additional ingredients beyond the extract and thus is identical to the extract.

Applicants state that a cell-free extract is a component of a cell-free system and thus appear to argue that these claims differ in scope. However each claim recites "comprising" and thus is open to additional components yet the recited components are identical. There are no components present in the "system" that are not present in the extract.

Claim 24 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). These claims are identical.

Claim 7 is objected to because of the following informalities: "in a cell-free system" should be "in the cell-free system". Appropriate correction is required.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1652

Claim 18 recites "wherein extra ATP-sulfurylase is expressed by a prokaryotic organism ..." yet the claim recites a cell-free extract. It is unclear how a product can be defined by an action. Did applicants intend "wherein the ATP-sulfurylase was produced by expression from a prokaryotic organism ..."?

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8 and 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blakesley et al. (WO 98/22615) in view of Swartz et al. (WO 00/55353). The rejection is explained in the previous Office Action.

Art Unit: 1652

Applicants argue that one of ordinary skill in the art would not be motivated to combine Blakesley with Swartz as Blakesley describes methods for preventing inhibition of nucleic acid synthesis by adding ATP sulfate adenylyltransferase (i.e., ATP sulfurylase) to inhibit pyrophosphorolysis. Applicants argue that therefore Blakesley teach that the disclosed system is then inhibited by adding enzymes to remove pyrophosphate. However, this is not persuasive as it appears to be based on a misconception by applicants as to what pyrophosphorolysis as discussed in Blakesley et al. is. Pyrophosphorolysis is not the cleavage of pyrophosphate. The first paragraph of Blakesley et al. makes it clear that pyrophosphorolysis is the cleavage of one or more terminal nucleotides from a growing nucleic acid chain during a nucleic acid synthesis reaction due to an excess of pyrophosphate and that this process is prevented by providing an agent, for example, a pyrophosphatase, capable of removing pyrophosphate. The remainder of Blakesley et al. clearly suggest ATP sulfurylase as such an agent. Therefore the system of Blakesley et al. is enhanced by the added ATP sulfurylase which utilizes the excess pyrophosphate and therefore inhibits pyrophosphorolysis.

Applicants argue that one of ordinary skill in the art would not be motivated to combine or modify the protein

Art Unit: 1652

synthesis method of Swartz with the nucleic acid synthesis method of Blakesley because they are two different processes. However, this is not persuasive because Swart et al. does not teach a system for only protein synthesis but teaches an *in vitro* transcription/translation system which is a system for both transcription (i.e., nucleic acid synthesis) and translation (i.e., protein synthesis) Thus a skilled artisan would be motivated to apply disclosures of methods for improving nucleic acid synthesis such as that of Blakesley et al. to the system of Swartz.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca E. Prouty whose telephone number is 571-272-0937. The examiner can normally be reached on Tuesday-Friday from 8 AM to 5 PM. The examiner can also be reached on alternate Mondays

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapura Achutamurthy, can be reached at (571) 272-0928. The fax phone number for this Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Rebecca Prouty/
Primary Examiner
Art Unit 1652